

Title (en)  
Method for producing deionized water

Title (de)  
Methode zur Produktion von deionisiertem Wasser

Title (fr)  
Méthode pour produire de l'eau déionisée

Publication  
**EP 0867224 A3 19981216 (EN)**

Application  
**EP 98105803 A 19980330**

Priority  
JP 9490797 A 19970328

Abstract (en)  
[origin: EP0867224A2] A method for producing deionized water by self-regenerating type electrodialysis deionization, which comprises (i) using a deionized water-producing apparatus containing an electrodialyzer comprising cation exchange membranes and anion exchange membranes alternately arranged between an anode compartment provided with an anode and a cathode compartment provided with a cathode, demineralizing compartments compartmentalized with anion exchange membranes on the anode side and compartmentalized with cation exchange membranes on the cathode side, and concentrating compartments compartmentalized with cation exchange membranes on the anode side and compartmentalized with anion exchange membranes on the cathode side, the electrodialyzer having ion exchangers accommodated in the demineralizing compartments, and (ii) applying a voltage while supplying water to be treated to the demineralizing compartments to remove impurity ions in the water to be treated, wherein at least a part of the untreated water or already treated water is withdrawn to be added to a concentrating water for recycle, a flow amount of untreated water to be introduced into the demineralizing compartments being from 2 to 5.5 to a flow amount of a concentrating water to be introduced into the concentrating compartments, a linear velocity of untreated water in the demineralizing compartments being from 0.5 to 7.0 cm/sec, and a linear velocity of a concentrating water in the concentrating compartments being from 1.2 to 20 times to the linear velocity in the demineralizing compartments. <IMAGE>

IPC 1-7  
**B01J 47/08**; **B01D 61/48**

IPC 8 full level  
**B01D 61/48** (2006.01); **B01J 47/08** (2006.01); **C02F 1/469** (2006.01); **C02F 1/42** (2006.01); **C02F 1/46** (2006.01)

CPC (source: EP US)  
**B01D 61/48** (2013.01 - EP US); **B01J 47/08** (2013.01 - EP US); **C02F 1/4695** (2013.01 - EP US); **C02F 1/4604** (2013.01 - EP US); **C02F 2201/46115** (2013.01 - EP US)

Citation (search report)  
• [YA] WO 8303984 A1 19831124 - KUNZ GERHARD  
• [Y] PATENT ABSTRACTS OF JAPAN vol. 096, no. 010 31 October 1996 (1996-10-31)

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